REMARKS

Applicants have reviewed the present Application in light of the Office Action mailed September 20, 2002. In the Office Action, the Examiner rejected Claims 1-15. Applicants amend Claim 1, cancel Claims 8-9 and 12-13 without prejudice or disclaimer and add new Claims 16-23. Thus, Claims 1-7, 10-11 and 14-23 are pending in the Application. Applicants respectfully request reconsideration in light of the following remarks and allowance of all pending Claims.

Information Disclosure Statement

Applicants filed an Information Disclosure Statement along with two PTO-1449 pages on October 4, 2001. Such PTO-1449 pages were considered by the Examiner on September 10, 2002. However, the Examiner did not initial the specific citations R, S and T on page 2 of the PTO-1449 pages. Applicants respectfully request confirmation that the citations R, S and T of page 2 of the PTO-1449 pages filed with an Information Disclosure Statement on October 4, 2001 were considered by the Examiner.

Rejections under 35 U.S.C. §102

Claim 1 was rejected by the Examiner under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,938,309 issued to Taylor ("*Taylor*"). Applicants respectfully traverse this rejection for the reasons discussed below.

To anticipate a claim, each and every limitation must be found in a reference. In addition, "[t]he identical invention must be shown in as complete detail as is contained in the ... claims" and "[t]he elements must be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 USPQ 2d 1566 (Fed. Cir. 1990); MPEP § 2131 (*emphasis added*).

Claim 1 is patentable over the cited art, because *Taylor* does not disclose, teach or suggest each element of the claim. For example, Claim 1 recites that at least one of multiple channels of an optical network have a variable bandwidth. The Examiner references "OC-12,

OC-48, and OC-[192] channels" of *Taylor* as teaching this limitation. *See* Office Action, section 2. *Taylor* discloses eight optical channels (λ_1, λ_2, λ_3 . . . λ_8). *See id.*, col. 3, lines 40-62 and Figure 1. *Taylor* states that each of such eight channels operates at OC-48 (2.5Mb/s). *See id.*, col. 3, lines 40-43. *Taylor* also discloses optical carrier levels OC-12 and OC-192, which operate at different bit rates and therefore require different bandwidths for communicating a signal. However, the disclosure in a reference of channels of different bandwidths does not in and of itself mean that any of such channels have a variable bandwidth. Nowhere does *Taylor* disclose, teach or suggest that the bandwidth of any of the eight channels may vary. Thus, *Taylor* does not disclose, teach or suggest one or more of multiple channels having variable bandwidth.

Therefore, for at least the reasons stated above, Applicants respectfully submit that Claim 1 is patentable over the cited art and request that the rejection to Claim 1 be withdrawn.

Rejections under 35 U.S.C. §103

Claims 2-7, 10-11 and 14-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Taylor* in view of U.S. Patent No. 6,175,586 issued to Lomp ("*Lomp*"). Applicants respectfully traverse these rejections for the reasons discussed below.

In order to establish a *prima facie* case of obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974).

The prior art as cited by the Examiner does not teach each element of Claim 2. The Examiner relies on *Taylor* as disclosing the limitations of Claim 1, from which Claim 2 depends. *See* Office Action, section 4. However, as discussed above with regard to Claim 1, *Taylor* does not disclose, teach or suggest one or more of multiple channels having variable bandwidth.

Moreover, there is no required motivation to combine *Taylor* and *Lomp* to teach the limitations of Claim 2. The Examiner states that "one skilled in the art would clearly have recognized that it would have been possible to change the bandwidth of a channel using a tunable filter." *See* Office Action, section 2. However, the mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); M.P.E.P. § 2143.01. The Examiner also states that "it would have been obvious to one skilled in the art at the time the invention was made to have varied the bandwidth of the channels via a filter in order to dynamically allocate bandwidth to channels based upon need." *See* Office Action, section 4. The Examiner has not cited language in any reference or within information commonly known to those skilled in the art that provides the necessary motivation or suggestion to combine these references. "Combining prior art references without the required evidence of a suggestion or motivation simply makes the Applicants' disclosure a blueprint for piecing together the prior art to defeat patentability, the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Federal Circuit case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the suggestion or motivation to combine prior art references. *See id.*; *C.R. Bard, Inc. v. M3 Sys., Inc.*, 48 USPQ.2d 1225, 1232 (Fed. Cir. 1998); *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983). The Examiner must identify specifically the reasons one of ordinary skill in the art would have been motivated to select the references and combine them.[1] Although evidence of suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, the range of sources available does not diminish the requirement for actual evidence. The Federal Circuit has confirmed that

[1] The showing must be clear and particular. *See, e.g., C.R. Bard*, 48 USPQ.2d at 1232. Where the Examiner does not explain the "specific understanding or principle within the knowledge of a skilled artisan" that would motivate one with no knowledge of the applicant's claimed invention to make the combination, the Federal Circuit infers that the Examiner selected the references with the assistance of hindsight. *In re Rouffet*, 149 F.3d 1350, 1358 (Fed. Cir. 1998).

conclusory "it would have been obvious" statements are not evidence.[2] Thus, the Examiner's suggestion that it would have been obvious to combine these references "in order to dynamically allocate bandwidth to channels based on need" does not constitute evidence. If the Examiner is relying on "common knowledge" or "well known" art in support of his rationale for combining the references, the Examiner is requested to produce a reference in support of his position pursuant to M.P.E.P. § 2144.03. If the Examiner is relying on personal knowledge to supply the required motivation or suggestion to combine, Applicants respectfully request that the Examiner produce an affidavit supporting such facts pursuant to M.P.E.P. § 2144.03.

Therefore, as discussed above, *Taylor* does not disclose, teach or suggest one or more of multiple channels having variable bandwidth, and there is no required motivation to combine *Taylor* and *Lomp* to teach the limitations of Claim 2. For at least these reasons, Applicants respectfully submit that Claim 2 is patentable over the cited art and request that the rejection to Claim 2 be withdrawn.

Claim 3 depends from Claim 2 and includes all the limitations of Claim 2. Thus, for at least the reasons stated above, Applicants respectfully request that the rejection to Claim 3 be withdrawn.

The prior art as cited by the Examiner does not teach each element of Claim 4. The Examiner states that *Taylor* teaches a communication system "wherein the input data rates are variable." *See* Office Action, section 4. However, as discussed above with regard to Claim 1, *Taylor* does not disclose, teach or suggest one or more of multiple channels having variable bandwidth. The Examiner further states that "it would have been obvious to one skilled in the art at the time the invention was made to have allowed the bit rates of the channels to be dynamically tunable in the system of Taylor according to the teachings of

---

[2] Conclusionary statements by the Examiner regarding the teaching of multiple references standing alone, are not "evidence." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999).

Lomp." The Examiner has failed to cite any required motivation to combine *Taylor* and *Lomp* to teach the limitations of Claim 4, as discussed above with regard to Claim 2. Therefore, for at least these reasons, Applicants respectfully submit that Claim 4 is patentable over the cited art and request that the rejection to Claim 4 be withdrawn.

Claims 5 and 6 depend, directly or indirectly, from Claim 4 and include all the limitations of Claim 4. Thus, for at least the reasons stated above, Applicants respectfully request that the rejections to Claims 5 and 6 be withdrawn.

The prior art as cited by the Examiner does not teach each element of Claims 7, 10-11 and 14-15 . In rejecting such claims, the Examiner states that "one skilled in the art would clearly have recognized that it would have been possible to change the bandwidth of a channel using a tunable passband filter." *See* Office Action, section 4. Again, as discussed above, the mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); M.P.E.P. § 2143.01. The Examiner additionally states that "it would have been obvious to one skilled in the art at the time the invention was made to have varied the bandwidth of the channels via a filter in order to dynamically allocate bandwidth to channels based on need." *See* Office Action, section 4. However, as discussed above with regard to Claim 2, the Examiner has not cited language in any reference or within information commonly known to those skilled in the art that provides the necessary motivation or suggestion to combine *Taylor* and *Lomp*. Therefore, for at least these reasons, Applicants respectfully submit that Claims 7, 10-11 and 14-15 are patentable over the cited art and request that the rejection to Claims 7, 10-11 and 14-15 be withdrawn.

New Claims

Applicants add new Claims 16-23. New Claims 16-23 contain no new matter and are fully supported by the specification as filed.

CONCLUSION

Applicants appreciate Examiner's careful review of the application. The Application has been reviewed in light of the Office Action mailed September 20, 2002. Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and full allowance of Claims 1-7, 10-11 and 14-23.

Enclosed is a check for $84.00 to cover the cost of an additional independent claim that is believed to be due. However, the Commissioner is hereby authorized to charge any deficiency or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.
Attorneys for Applicants

Terry J. Stalford
Reg. No. 39,522

Date: December 20, 2002

Correspondence Address:
Baker Botts L.L.P.
2001 Ross Avenue, Suite 600
Dallas, Texas 75201-2980
Tel. 214.953.6477

MARKED-UP VERSION AND NEW CLAIMS

1. **(Amended)** A fiber optic communication system, comprising:

multiple channels, **at least one** **[one or more]** of said channels having **a** variable bandwidth.

2. The system of Claim 1, wherein said bandwidth is varied by using a tunable filter.

3. The system of Claim 2, wherein said tunable filter is an acousto-optic tunable filter.

4. A fiber optic communication system, comprising:

multiple channels, wherein the bit rates of one or more of said channels are dynamically tunable.

5. The system of Claim 4, wherein said channels are tuned using tunable filters.

6. The system of Claim 5, wherein said tunable filters are acousto-optic tunable filters.

7. A fiber optic communication system, comprising:

multiple emitters operably connected to couple signals into a transmission medium;

multiple modulators operably connected to modulate data onto one or more of said signals;

multiple tunable passband filters operably connected to filter one or more of said signals by selectively tuning passbands of said filters.

Please cancel Claim 8 without prejudice or disclaimer.

Please cancel Claim 9 without prejudice or disclaimer.

10. A method of operating an optical communication system, said system having multiple channels, comprising the step of:

dynamically tuning the spectrum widths of said channels.

11. The method of Claim 10, wherein said spectrum widths are tuned using tunable filters.

Please cancel Claim 12 without prejudice or disclaimer.

Please cancel Claim 13 without prejudice or disclaimer.

14. A method of allocating bandwidth on an optical communication system, comprising the steps of:

modulating data onto one or more carrier signals to produce one or more modulated signals, each of said modulated signals having spectrum width;

allocating bandwidth to said modulated signals according to the spectrum width of said modulated signals.

15. The method of Claim 14, wherein said bandwidth is allocated by tuning tunable filters.